AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior version, and listings, of claims in the application:

1-13. (Cancelled)

14. (Currently amended) ~~The method of claim 1, wherein prior to said culturing said oocyte is treated by~~ A method of culturing an oocyte *in vitro*, comprising microinjecting into the cytoplasm of said oocyte a protective agent which (i) comprises a sugar, and (ii) is substantially non-permeating with respect to mammalian cell membranes and incubating said oocyte in a hypertonic medium having an osmolarity greater than 300 mosm.

15. (Previously presented) The method of claim 14, wherein said protective agent comprises at least one sugar selected from the group consisting of sucrose, trehalose, fructose, dextran, and raffinose.

16. (Previously presented) The method of claim 14, wherein said protective agent comprises at least one sugar selected from the group consisting of glucose, sorbitol, mannitol, lactose, maltose, and stachyose.

17. (Previously presented) The method of claim 14, wherein said protective agent comprises at least one sugar with a glass transition temperature greater than –50°C.

18. (Previously presented) The method of claim 17, wherein said protective agent comprises at least one sugar with a glass transition temperature greater than -30°C.

19. (Previously presented) The method of claim 14, wherein said protective agent comprises at least one sugar with a molecular weight greater than 120 daltons.

20. (Previously presented) The method of claim 14, wherein said protective agent comprises a glycolipid or a glycoprotein that comprises at least one sugar moiety derived from a sugar with a glass transition temperature greater than -50°C.

21. (Previously presented) The method of claim 14, wherein the cytoplasmic concentration of said sugar is less than or equal to about 1.0 M following microinjection.

22. (Previously presented) The method of claim 14, wherein the cytoplasmic concentration of said sugar is less than or equal to about 0.2 M following microinjection.

23. (Currently amended) ~~The method of claim 6, wherein prior to said culturing~~

~~said embryo is treated by~~ A method of culturing an embryo *in vitro* comprising microinjecting into the cytoplasm of said embryo a protective agent which (i) comprises a sugar, and (ii) is substantially non-permeating with respect to mammalian cell membranes and incubating said embryo in a hypertonic medium having an osmolarity greater than 300 mosm.

24. (Previously presented) The method of claim 23, wherein said protective agent comprises at least one sugar selected from the group consisting of sucrose, trehalose, fructose, dextran, and raffinose.

25. (Previously presented) The method of claim 23, wherein said protective agent comprises at least one sugar selected from the group consisting of glucose, sorbitol, mannitol, lactose, maltose, and stachyose.

26. (Previously presented) The method of claim 23, wherein said protective agent comprises at least one sugar with a glass transition temperature greater than -50°C.

27. (Previously presented) The method of claim 23, wherein said protective agent comprises at least one sugar with a glass transition temperature greater than -30°C.

28. (Previously presented) The method of claim 23, wherein said protective agent comprises at least one sugar with a molecular weight greater than 120 daltons.

29. (Previously presented) The method of claim 23, wherein said protective agent comprises a glycolipid or a glycoprotein that comprises at least one sugar moiety derived from a sugar with a glass transition temperature greater than -50°C.

30. (Previously presented) The method of claim 23, wherein the cytoplasmic concentration of said sugar is less than or equal to about 1.0 M following microinjection.

31. (Previously presented) The method of claim 23, wherein the cytoplasmic concentration of said sugar is less than or equal to about 0.2 M following microinjection.

32. (New) The method of claim 14, wherein the osmolarity of said medium is greater than 320 mosm.

33. (New) The method of claim 32, wherein the osmolarity of said medium is greater than 340 mosm.

34. (New) The method of claim 33, wherein the osmolartiy of said medium is

greater than 360 mosm.

35. (New) The method of claim 14, wherein said medium comprises a sugar selected from the group consisting of sucrose, trehalose, fructose, dextran, and raffinose.

36. (New) The method of claim 23, wherein the osmolarity of said medium is greater than 320 mosm.

37. (New) The method of claim 36, wherein the osmolarity of said medium is greater than 340 mosm.

38. (New) The method of claim 37, wherein the osmolartiy of said medium is greater than 360 mosm.

39. (New) The method of claim 23, wherein said medium comprises a sugar selected from the group consisting of sucrose, trehalose, fructose, dextran, and raffinose.